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10/730,954	12/09/2003	Oliver Keren Ban	AUS920030609US1	3697

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EXAMINER	
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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/730,954	BAN, OLIVER KEREN	
	Examiner	Art Unit	
	KAMAL B. DIVECHA	2451	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-6,8,10-13 and 22-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-6, 8, 10-13, 22-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Action is in response to communications filed 7/25/08.

Claims 1, 3-6, 8, 10-13, 22-26 are pending.

Claims 2, 7, 9, 14-21 are cancelled in response filed 7/25/08.

Claims 22-26 are newly added claims in response filed 7/25/08.

Response to Arguments

Applicant's arguments with respect to claims above have been considered but **are moot in view of the new ground(s) of rejection.**

More specifically, applicant argues in substance that "However, applicant fails to find a specific disclosure in the cited sections of Eklund of a specific element which is equivalent to the claimed code item to represent said plurality of other headers in one of said packets…Applicant submits that not all of the alleged elements in Eklund which are equivalent to all of the applicant's elements have been pointed to with the specificity required to establish a rejection under 35 USC 102", remarks, pg. 14).

In response to applicant submissions, applicant should first note the usage of comments in the rejection which explicitly shows which section corresponds to which element.

For example:

means for providing conversion means to said terminal router for converting said code item back into said plurality of headers represented by said code items, whereby conversion means convert said code item back into said original plurality of headers (col. 7 L7-56, col. 9 L6-67: means for decompression, fig. 4, fig. 8);

Clearly, in view of cited sections, e.g. col. 7 L7-56, one of ordinary skilled in the art, in view of specification, would know what represents the code item in the cited sections.

Applicant also argues that Eklund does not disclose the implementation of determining whether the destination router has a conversion process/means for converting the code item back into the plurality of headers...and if the destination router does not have the conversion process, providing the conversion process to the destination router for converting...", e.g. remarks, pg. 15.

In response to applicant argument that Eklund does not disclose the implementation of determining whether the destination router has a conversion means/process, Examiner disagrees.

Eklund discloses (col. 4 L6-17):

> Specifically, compression is initiated by the second router examining and processing the full header packet upon detecting that the destination address in the IP header is its own address. A context is created corresponding to the IP header by storing information of the IP header in corresponding relation to the CID in the second router. The context including information of the IP header is also stored in corresponding relation to the CID in the first router. If the CID has been previously stored in the second router, then information of the IP header is updated to new values indicated by the IP header of the full header packet, thereby refreshing the context.

In other words, Eklund discloses the process of determining and/or checking whether the CID has been previously stored in the second router, if yes, then information is updated to new values.

The CID enables the conversion process by looking up the CID and the associated context, i.e. headers, and converting the CID back into said plurality of headers.

Eklund also discloses providing the conversion means, i.e. code book or CID and its associated context, to said destination router, as evidenced in the following section, i.e. col. 7 L25-56, reproduced herein.

> The first router **1302** sends the full header packet including the modified IP header **403** and the inserted routing header **404** to the second router **1303**. The second router **1303** upon receipt of the full header packet including the modified IP header **403** and the inserted routing header **404** creates a context related to the packet stream to which the full header packet belongs or refreshes a previously stored context corresponding to the packet stream to which the full header belongs. The second router **1303** creates a context by storing information of the IP header **403** for later use in corresponding relation to CID1 stored in the CID field **701** of the routing header **404**. The second router **1303** refreshes the context by updating values and information of the previously stored IP header with the values and information provided by the IP header **403** of the full header packet.
>
> After conducting the above described processes, IP header compression has been initiated. Accordingly, the first router **1302** now sends all subsequent packets of the packet stream to the second router **1303** without the IP header. In practice however, the subsequent packets are sent with compressed IP headers which contain the CID and information corresponding to fields that are unpredictable. Accordingly, from this point forward IP header compression is being conducted so as to transmit a reduced amount of data from the first router **1302**, which serves as the compressor, to the second router **1303**, which serves a the decompressor. The second router **1303** decompresses the IP headers of the subsequent packets by referring to the previously stored context by use of the CID transmitted with the subsequent packets. Thus, the second router **1303** restores the subsequent packets to their original format including the IP header and sends the restored packets to the second host **1304**.

In other words, the second router or destination router creates and/or updated the context information when the first router sends the information, i.e. provides the information.

However, Eklund does not teach the process of providing in response to the determination whether the destination router has the conversion means (See the detailed rejection).

In the response, applicant also argues that claims 1 and 3-6 define a tangible hardware system.

In response to this argument, Examiner disagrees at least for the fact that the system fails to disclose a physical hardware element and/or component to constitute the system as a hardware system, and the means can be implemented as program modules.

Specification

The objection is withdrawn in light of applicant's response, more specifically, in view of cancelled claims.

Claim Rejections - 35 USC § 112

The rejection presented in the previous office action is withdrawn in light of applicant's response.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 1 and 3-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 recites:

> In a communication network …a system for expediting the transmission comprising:
> means for…
> means for…
> means for…
> means for…
> means for...

Initially, the claim fails to fall into any of the four enumerated category of the patentable statutory subject matter as set forth above.

Although the claim recites the term "system", the claim actually lacks the necessary physical articles/objects/elements/components to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter.

As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

[Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994).

Merely claiming nonfunctional descriptive material, i.e., abstract ideas stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make the claim statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because "[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer").]

See MPEP 2106.01.

Moreover, the specification is evidenced to suggest "the means" to include the programs, i.e. computer code, listing, subroutine, algorithm, etc. For example: pg. 8 line 33 to pg. 9 lines 5.

As such, when the means are interpreted to include program(s) or code(s), the claim, as a whole, results in a program per se and/or software per se.

Claims 3-6 are rejected for the same reasons as set forth in claim 1.

Also note that the computer usable medium as in claim 22-26 in interpreted as RAM as admitted by the applicant, remarks, pg. 12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 1, 3-6, 8, 10-13 and 22-26 are rejected under **35 U.S.C. 103(a)** as being obvious over Eklund (US 7,058,728 B1).

As per claim 1, Eklund discloses in a communication network wherein packets of data are transmitted from a transmitting station to an addressed receiving station via a plurality of routers that determine the path of the transmission (fig. 4, fig. 8, fig. 13-14, col. 3 L30 to col. 4 L39), a system for expediting the transmission comprising:

means for transmitting packets, each comprising a payload section including the content data being transmitted, a header including the address of the receiving station and a plurality of other headers (col. 7 L25-65, col. 8 L25-57, fig. 1-3: data packet, fig. 4, fig. 8);

means for substituting a code item to represent said plurality of other headers in one of said packets being transmitted (col. 7 L7-65, col. 9 L7-67: i.e. means for compression);

means for determining which of said routers is the destination router to the receiving display station (col. 6 L37-58, col. 8 L36-57: by examining the destination IP address field);

means for determining whether said destination router has conversion means for converting said code item back into said plurality of headers represented by the code items (col. 4 L13-17);

means for providing conversion means to said terminal router for converting said code item back into said plurality of headers represented by said code items, whereby conversion means convert said code item back into said original plurality of headers (col. 7 L7-56: providing CID and context information to the second router, col. 9 L6-67: means for decompression, fig. 4, fig. 8); and

means for transmitting said packet with original plurality of headers from said terminal router to said receiving display station (col. 7 L50-56, col. 9 L49-52).

However, Eklund does not explicitly disclose means for providing conversion means if said destination router does not have said conversion means.

But, Eklund does disclose the means for determining and providing the conversion means to the second router as set forth above.

Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify Eklund in order to provide the means for conversion if said destination router does not have said conversion means.

One of ordinary skilled in the art would have been motivated because it would have enabled the destination router to convert the code item back to the original headers (Eklund: col. 4 L6-27, col. 7 L25-56).

As per claim 3, Eklund discloses the system wherein said means for providing said conversion means provide said conversion means to a set of said routers; and further including: means at each of said set of routers for determining if the header including the address of the receiving station indicates that the router is the destination router; and means responsive to said determining means for converting said code item through said conversion means back into said represented plurality of headers upon a determination that said router is the destination router (col. 7 L7-65, col. 8 L25 to col. 9 L62, fig. 4, fig. 8).

As per claim 4, Eklund discloses the system wherein the conversion means includes a conversion table (col. 9 L7-53, col. 7 L25-56: context table).

As per claim 5, Eklund discloses the system wherein said network is a packet switching network (col. 5 L56-66, fig. 13, fig. 14).

As per claim 6, Eklund discloses in a communication network wherein packets of data are transmitted from a transmitting station to an addressed receiving station via a plurality of routers that determine the path of the transmission (fig. 4, fig. 8, fig. 13-14, col. 3 L30 to col. 4 L39), a system for expediting the transmission comprising:

means for transmitting packets, each comprising a payload section including the content data being transmitted, a header including the address of the receiving station and a plurality of other headers (col. 7 L25-65, col. 8 L25-57, fig. 4, fig. 8);

means for substituting a code item to represent said plurality of other headers in one of said packets being transmitted (col. 7 L7-65, col. 9 L7-67: i.e. means for compression);

means for determining which of said routers is a last router beyond which normal transmission is expedited (col. 6 L37-58, col. 8 L36-57: by examining the destination IP address field);

means for determining whether said destination router has conversion means for converting said code item back into said plurality of headers represented by the code items (col. 4 L13-17);

means for providing conversion means to said last router for converting said code item back into said plurality of headers represented by said code items, whereby conversion means convert said code item back into said original plurality of headers (col. 7 L7-56, col. 9 L6-67: means for decompression, fig. 4, fig. 8); and

means for transmitting said packet with original plurality of headers from said last router to said receiving display station (col. 7 L50-56, col. 9 L49-52).

However, Eklund does not explicitly disclose means for providing conversion means if said destination router does not have said conversion means.

But, Eklund does disclose the means for determining and providing the conversion means to the second router as set forth above.

Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify Eklund in order to provide the means for conversion if said destination router does not have said conversion means.

One of ordinary skilled in the art would have been motivated because it would have enabled the destination router to convert the code item back to the original headers (Eklund: col. 4 L6-27, col. 7 L25-56).

As per claim 8, 10-13 and 22-26, they do not teach or further define over the limitations in claims 1 and 3-7. Therefore claims 8, 10-13 and 22-26 are rejected for the same reasons as set forth in claims 1 and 3-7.

Additional References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Birdwell et al., US 6,032,197: Data Packet Header Compression for unidirectional transmission.

b. Le et al., US 6,542,931 B1: Using Sparse feedback to increase bandwidth efficiency in high delay, low bandwidth environment.

c. Koodli, US 6,608,841 B1: System and Method for achieving robust IP/UDP/RTP Header compression in the presence of unreliable networks.

d. Hamiti et al., US 6,751,209 B1: Header Compression in Real Time Service.

e. Hata et al., US 6,889,261 B2: Method and Apparatus for header compression.

f. Agarwal, US 6,963,570 B1: Method and Apparatus for Adaptive Loss-less compression of cell/packet headers.

g. Hannu et al., US 6,999,429 B1: Access Technology integrated header compression.

Conclusion

Examiner's Remarks: The teachings of the prior art should not be restricted and/or limited to the citations by columns and line numbers, as specified in the rejection. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in its entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

In the case of amendments, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and support, for ascertaining the metes and bounds of the claimed invention.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is (571)272-5863. The examiner can normally be reached on Increased Flex Work Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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